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ECLIPSIS LUNÆ Totalis cum morâ, Anno 1682, die 21 & 22 Feb. vesp. & mane st. n.

OBSERVATA GEDANI

à JOH. HEVELIO.

Tempus sec. horol. ambul.	Ordo Phaen.	Digiti Eclipt.	Altitudines Stellarum.	Per quas Maculas transiverint umbrae Sectiones, & quae insuper notata fuerint	Tempus ex altit. Correc.
h. m. s.					h. m. s.
8 41 18			Palilicii 39° 53'		8 40 46
8 44 9			Palilicii 39 27		8 44 20
8 48 14			Palilicii 39 0		8 47 59
10 8 28				Initium penumbræ dilutissimæ	10 9 0
10 12 50				Penumbra densior	10 13 20
10 19 5				Penumbra adhuc crassior	10 19 36
10 23 50				Penumbra densissima	10 24 24
10 24 30				Initium Eclipsæ circa 150° limbi in 95° sc. à puncto super. lineæ perpendicularis Nonagesimi ortum versus contigit.	10 25 5
10 29 45	1	1½ digiti		Incedebat per M. Germanicianum, ad Mare Syriticum & Montem Acabe	10 30 30
10 32 13	2	2 ferè		Per M. Porphyriten, loca Paludosa Inf. Cercinna, Sinum Syriticum, per Mont. Sacrum & M. Casium	10 32 50
10 36 30	3	2½ ferè		Ad M. Baronium, Inf. Æthusam, per me- dium Sinum Syrbonis & M. Pharan	10 37 10
10 43 25	4	3½		Per Sinum Apollinis, M. Ætnam, Inf. Letoam, ad Inf. Didymam	10 44 10
10 47 25	5	4½ dig.		Ad Inf. Majorcam, Vulcaniam, Lemnos, Carpathos & M. Horeb	10 48 15
10 52 20	6	5½		Ad Lacrum Nigrum majorem, per M. Argentarium, Sipylum, Masicytum; Ta- bor, Sinai, & desertum Raphidim	10 53 10
10 55 45	7	6½		Per scopulos hyperboreos, Inf. Besby- cam, M. Olympum, Didymum & M. An- tilibanum	10 56 40
11 0 33	8	7¾ dig.		Ad Inf. Cyaneam, M. Horminium, M. Uxii & Montes Coibacaranos	11 1 30 Tempus

Tempus sec. boral. ambul.	Ordo Phasiti	Digiti Eclipt.	Altitudines Stellarum	Per quas <i>Maculas transuevint umbrae Sectiones.</i> & quae insuper notata fuerint	Tempus altit. corr.
h. ' "					
II 4 30	9	8½		Per M. <i>Ambonum</i> ad Inf. <i>Apolloniam</i> , & Sinum <i>Atheniensem</i> , per M. <i>Moschum</i> , <i>Uxii</i> , & <i>Coibac aranos</i>	II 5
II 9 59	10	9¼		Per Lacum Hyperboreum superiorem, Pa- ludem <i>Byces</i> , per Montem <i>Herculis</i> , & Sinum extremum <i>Ponti</i>	II 10
II 13 30	11	10 dig		Per Lacum Hyperboreum inferiorem, M. <i>Cimmerium</i> , & ad Sinum inferiorem Maris <i>Caspii</i>	II 14
II 16 30	12	10½ fere		Per M. <i>Riphaos</i> , Pal. <i>Maotidem</i> , Inf. <i>Alopeciam</i> , ad Inf. majorem <i>Caspii</i> per M. <i>Nerosum</i>	II 17 1
II 19 10	13	11¼		Ad Ripam Paludis <i>Maotidis</i> & Mont. <i>Hippoci</i>	II 20 1
II 22 0	14	11½		Per M. <i>Alaunum</i> , & Lacum Occident. minorem	II 23
II 26 30		12 dig		Totalis Obscuratio circa 297° limbi in 94° sc. à puncto super. lineæ perpendi- cularis Nonagesimi ortum versus depre- hensa	II 27 3
II 35 36			Pollucis 52° 13'		II 37
II 37 35			Pollucis 52 0		II 38 4
II 38 50			Pollucis 51 41		II 39 3
II 58 20	die 22	Feb. mane		Recuperatio luminis circa 118° limbi in 88° sc. à puncto superiori lineæ perpen- dicularis Nonagesimi occasum versus extitit.	I 0
I 0 40	15	½ dig.		Ad M. <i>Alabastrinum</i> , M. <i>Pentadactylum</i> , M. <i>Audum</i> , & Pal. <i>Maraotidem</i>	I 2
I 3 35	16	¼		Per M. <i>Porphyritem</i> , ad Mare <i>Syrcticum</i> & per M. <i>Eoum</i>	I 5
I 8 10	17	2 fere		Per M. <i>Baronium</i> , loca Paludosa, Inf. <i>Cer- cinna</i> . inter mare <i>Syrcticum</i> & <i>Aegyptia- cum</i> ad S. <i>Syrbonis</i> .	I 10

pus sec. l. ambul.	Ordo Phasiz	Digiti Eclipt.	Altitudines Stellarum	Per quas Maculas transverint umbra Sectiones, & que insuper notata fuerint.	Tempus ex al- tit. correctum,
I. II.					h. I. II.
11 48	18	2½ fere		Per Sinum <i>Apollinis</i> , Inf. <i>Taraciniam</i> , Inf. <i>Æthufam</i> , Sinumque <i>Syrbonis</i>	1 13 54
16 20	19	3½		Ad Inf. <i>Majorcam</i> , per M. <i>Ætnam</i> , M. <i>Neptunum</i> , <i>Jachyntum</i> , Inf. <i>Letoam</i> , Inf. <i>Didymam</i> & M. <i>Lyon</i>	1 18 33
20 50	20	4½ dig.		Ad Inf. <i>Corficam</i> , per Inf. <i>Vulcaniam</i> , & <i>Carpathos</i> , ad mare <i>Mortuum</i> , per defer- tum <i>Sin</i>	1 23 6
24 39	21	5½ dig.		Ad M. <i>Argentarium</i> , mare <i>Pamphilium</i> , Inf. <i>Cyprum</i> per M. <i>Horminium</i>	1 27 0
26 15	22	6 fere		Per Mont. <i>Apenninum</i> , ad Lacum <i>Tra-</i> <i>simenum</i> , ad Mont. <i>Sipylum</i> per M. inter. <i>Libanum</i>	1 28 40
28 32	23	6½		Ad M. <i>Carpathos</i> , per Inf. <i>Besbicam</i> , M. <i>O-</i> <i>lympum</i> , <i>Didymum</i> & M. <i>Dalangeros</i>	1 31 0
31 12	24	7½ dig.		Per M. <i>Perce</i> , <i>Byzantium</i> ad M. <i>Hormini-</i> <i>um</i> , & per M. <i>Antitaurum</i>	1 33 44
35 59	25	8½		Per Sinum <i>Circinitem</i> , Inf. <i>Macram</i> , Inf. <i>Apolloniam</i> , medium Montem <i>Moschum</i> , atque Montes <i>Sogdianos</i>	1 38 37
39 33	26	9 dig.		Per Lac. <i>Hyperboreum</i> inferiorem, Pal. <i>Byces</i> , M. <i>Sirobilum</i> , per Sin. extremum <i>Ponti</i> ac M. <i>Paropamisum</i>	1 42 15
41 45	27	9½ dig.		Inter Pal. <i>Byces</i> & Lacum <i>Corosondame-</i> <i>itis</i> , per M. <i>Herculis</i> & M. <i>Caucasum</i> in- feriorem	1 44 30
44 19	28	10		Per M. <i>Cimmerium</i> , M. <i>Tancon</i> , & M. <i>Ne-</i> <i>rosum</i>	1 47 9
47 20	29	10½		Per Pal. <i>Maotidem</i> , Inf. minorem maris <i>Caspii</i> , Montemque <i>Nerosum</i> superiorem	1 50 14
51 44	30	11 paul plus.		Per M. <i>Alaunum</i> , M. <i>Sanctum</i> , Montefq; <i>Hippoci</i>	1 54 42
56 12		12 dig.		Finis circa 294° limbi in 97 sc. gradu à puncto superiori lineæ perpendicularis Nonagesimi occasum versus contigit.	1 59 17

Tempus

Tempus sec. horol. ambul.	Ordo Phasii	Digiti Eclipt.	Altitudines Fixarum.	Per quas Maculas transierint umbrae Sectiones, & quæ insuper notata fuerint.	Tempus ex al- tit. correctum.
h. ' "					h. ' "
1 57 10				Densissima Penumbra	2 0 17
2 1 15				Satis adhuc crassa	2 4 27
2 2 30				Paulo dilutior	2 5 45
2 10 20				Penumbra dilutissima	2 13 42
2 12 30				Finis Penumbra	2 15 0
2 15 39			Altitudo Pollucis 29' 12"		2 19 7
2 17 35			Eadem Altitudo 28 46		2 22 8

ANIMADVERTENDA

In *Eclipsin* Anno 1682, die 21 Feb.

Gedani observatam.

Cum Tabulæ *Rudolphine* bene notabilem hac die *Eclipsin*, & quidem totalem cum morâ ostenderent, quales exquisitè observare rarâ alias contingit; proinde summa alacritate ad illam ex meâ rursus, *DEI* Benignitate, erectâ *speculâ*, attendi; præprimis cum cœlum omninò sudum extiterit, ut quavis exoptatissima hâc in parte mihi pollicerer. Totum igitur diem 21 *Febr.* impendi, partim ut horologia ad *Sciatericum* lineæ Meridianæ applicatum dirigerem, atque sic omnia parata haberem, quæ ad ejus generis *Observationes* requiruntur.

Inguente *Eclipsi* umbra erat valde diluta, limbusq; ejus quasi anfractuus, & minime terminatus, sic ut difficulter admodum ab initio *Phases* determinari potuerint, nec accurate distingui, per quas *Maculas* umbra transibat, successu tamen temporis crescente *Eclipsi*, distinctius omnia deprehendebantur. Color a initio videbatur satis tristis, obscurus, & fuliginosus, ac si *Eclipsis*, eadem ratione, circa maximam obscurationem, ut illa Anno 1642. mens. April. adeò sese obumbratam sistere veller, quòd vix conspiceretur; sed res plane aliter cecidit, siquidem *Luna* cum jam omninò esset *eclipsata*, totus tamen ejus discus satis clare in oculos incurrebat: color namq; ejus

tum

tum omninò rubidus sive sanguineus, aut rubiginosus erat, qui eouſq; perseverabat, donec *Luna* ad medietatem lumen suum recuperasset, atq; tum rurſus satis obscura & fuliginosa apparuit; adeò ut omnium optime *Phases* omnes, per quasnam nimirum *Maculas* umbra transierit, annotatæ fuerint. In summâ, hujus *Eclipses* observatio ex voto nobis successit; non solùm enim Initium & Finem, sed etiam ipsum momentum totalis Obscurationis, & Recuperationis luminis, cum 30 *phasibus* (quod rarò admodùm contingit) diligentissime mihi deprehendere Cœlum indulſit. Per quas verò *Maculas* umbræ sessiones incesſerint, tum quid amplius notatu dignum sub tempore *Eclipses* extiterit, ex ipsa observatione atq; delineationibus ad oculum clare patet, non minus ex subsequenti *Tabella* quouſq; *Calculus Rudolphinus* ab hac observatione, atq; sic ab ipso Cœlo discedat.

	<i>Ex Calculo Rudolphino</i>	<i>Ex Obser- vatione.</i>	<i>Differentia.</i>
	h. ' "	h. ' "	' "
Initium <i>Eclipses</i> .	10 13 33	10 25 5	11 32 Tardius
Totalis Obscuratio.	11 10 11	11 27 30	17 19 Tardius
Maxima Obscuratio.	0 5 43	0 13 49	8 6 Tardius
Recuperatio lumin.	1 1 15	1 0 8	1 7 Citius
Finis <i>Eclipses</i> .	1 57 53	1 59 17	1 24 Tardius
Mora totalis obscurat.	1 51 4	1 32 38	18 26 Brevior
Tota duratio <i>Eclipses</i>	3 44 20	3 34 12	10 8 Brevior

There having been several Accounts of this *Eclipse* inserted in Two succeeding Transactions, it may not perhaps be unfit to mention what Mr. *Jacobs* an *English* Merchant now residing at *Lisbon*, inform'd Mr. *J. Flamsteed* in a Letter dated *June 15. 1682.* That He observed the beginning of it there at $8^h 31' p. m$ which gives the difference of Meridians betwixt the Observatoy at *Greenwich*, and *Lisbon*, $41\frac{1}{2}$ Minutes of time, or $10^{\circ} 22'$ considerably different from our Mapps and Sea-Charts.

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